

INSTALLED VEHICLE TRANSIT MONITOR

Model Series ~ VMF
VMF-TA ~ VMF-TB ~ VMF-TA-4

FEATURES:

- BETA / GAMMA DETECTORS
- OPERATES ON AC OR OPTIONAL BATTERY "BACK-UP"
- **VMF-TA** ALARMS AT 7 $\mu\text{R/hr}$ RISE WITHIN 1 SECOND
- **VMF-TA & VMF-TB**
PLASTIC SCINTILLATORS: 792 in³ VOLUME EACH
SENSITIVE AREA: 528 in² EACH
- **VMF-TB** SEES AND CAN ALARM AT 1 $\mu\text{R/hr}$ ABOVE BACKGROUND
- **VMF-TA-4X** DOUBLES THE DETECTOR AREA & HAS 2 PM TUBES IN EACH TOWER
- **VMF-TA-4X & VMF-TA-4X-O**
PLASTIC SCINTILLATORS: 3315 in³ VOLUME EACH
SENSITIVE AREA: 2210 in² EACH
- **VMF-TA-4X-O OPTIONAL:** OVERHEAD DETECTOR
- **OPTIONAL:** WIRELESS REMOTE NOTIFICATION – PHONE, EMAIL, TEXT, ETC.
- REAL TIME DATA DOWNLOAD & ARCHIVE
- VIDEO – REAL TIME DISPLAY & CAPTURE
- AUDIO & VISUAL ALARM INCLUDES STROBE & HORN
- COMPLETELY WEATHER PROOF METAL HOUSING
- DYNAMIC BACKGROUND SUBTRACT
- COMPUTER & SOFTWARE
- FAST RATE OF CHANGE DESIGN
- CONTINUOUS OPERATION: "SET AND FORGET"
- BI-LATERAL ENTRY DIRECTION
- **OPTIONAL:** VEHICLE SPEED SENSOR
- **OPTIONAL:** LICENSE PLATE CAPTURE
- **OPTIONAL:** NEUTRON DETECTOR
- **IP 67 DETECTOR;** IP 52 ELECTRONICS



VMF-TA-4X



**VMF-TA-4X-O
OVERHEAD DETECTOR OPTION**

Model VMF-TB

Achieves greater sensitivity by stop and count approach.

This system can be installed at entrance and/or exit gates, at weight stations or check points, or anywhere that cars, trucks, rail cars or pedestrians will pass by; preferably at reduced speeds for more accurate readings.

Background is continually updated and subtracted thus giving net vehicle reading.



TECHNICAL ASSOCIATES

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DESCRIPTION:

Model SERIES VMF are high sensitivity Gamma Monitoring systems for determining possible radiation contamination in containers or vehicles on a non-pause basis.

- **VMF-TA, VMF-TB, & the VMF-TA-4** includes the electronic control/alarm console plus two rugged weather proof detectors each with Plastic Scintillators with 792 in³ volume each & a sensitive area of 528 in² each.
- The **VMF-TA-4X & the VMF-TA-4X-O** includes the electronic control/alarm console plus two rugged weather proof detectors each with Plastic Scintillators & dual PM tubes with 3315 in³ volume each & a sensitive area of 2210 in² each.
- Rate of change electronics with audio and visual alarms.
- Operates from 110/220 AC power main; optional battery back-up.
- Operation for rugged outdoor use as well as indoors with bi-lateral direction entry.
- Since the operation of this instrument is based on rate of change in radiation, it will reliably pick up contamination as it passes near the monitor.
- Indoor/Outdoor Camera - Video capture of truck type, driver, and optional license plate capture.
- Free-standing strobe & horn alarm.

SPECIFICATIONS:

Detectors - Plastic Scintillators:	VMM-TA-4: 4 ea. 12" W x 1.5" D x 44" H VMF-TA & VMF-TB: 2 ea. 12" W x 1.5" D x 44" H Sensitive Volume: 792 in ³ per detector. VMF-TA-4X: 2 each 26" W x 1.5" D x 85" H premium Sensitive Volume: 3315 in ³ per detector. Sensitive Area: 2210 in ² per detector. Dual PM Tubes in each detector. OPTIONAL: VMF-TA-4X-O: ADD (1) 26" W x 1.5" D x 85" H premium Sensitive Volume: 3315 in ³ per detector. Sensitive Area: 2210 in ² per detector. Dual PM Tubes in overhead detector.
Range:	1 µR/hr to 1 mR/hr.
Power Requirements:	110/220 Volts AC, 50/60 Hz.
Power Connection:	Conduit or cable 6 ft. cable furnished. Three Prong grounded connector.
High Level Alarm:	Flashing red light and intermittent 2900 Hz tone. (90 dB)
Alarm Set:	VMF-Series internal factory set at .007 mR/hr rise per second. May be reset by user. VMF-TB internal factory set at 10% above ambient background. May be reset by user.
Housing:	Weather-tight NEMA rated steel housing; water, moisture, & dust tight.
Cable:	100 ft Standard (User Specified Length)
DISPLAY	
Alarm Indicators:	Ready - OK- High Alarm -Fail - Battery Power in Use - Audio/Visual Alarm.
Count Time:	1 to 20 seconds (VMF-TB only).
Energy Range:	Gamma: 80 KeV to 6 MeV. Beta: above 1 MeV, includes P ³² , Sr ⁹⁰ , & N ¹⁶ .
Communications:	Built-in serial port and Ethernet Node.



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WEIGHT & DIMENSIONS:

Dimensions: Control Box / Computer: 16" x 20" x 10" typical plus alarm Beacon.
Detector Towers: VMF-TA, VMF-TB, VMF-TA-4: 54" H x 15.5" W x 7" D.
Weight: 120 lbs
Detectors Towers: VMF-TA-4X, VMF-TA-4X-O: 90" H x 30" W x 5" D.
Weight: 1260 lbs

OPTIONAL ACCESSORIES:

Check Source: RAU-BGX, uranium source; license exempt.
Additional Relay: 5A SPDT to operate other circuits.
Remote Alarm: RAL-3W flasher, siren.
Power: 220 V, 50-60 Hz.
Battery Back-up.
Alternate Detector Types & Sizes: NaI(Tl) Scintillators or BGO crystal.
Additional Detectors: Plutonium or Neutron or Beta.
Photo cell vehicle sensors(s) to initiate count
Video: License plate capture
Vehicle Speed Record
Shielding: Provision made for adding shielding plates provided



Sample Display Readout

VMF-L/O uses the same detectors as the other VMF Series models, but has simplified electronics with the LAM-10L "Alarming Ratemeter", instead of "Rate of Change" electronics.



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